Abstracts

Adjustable Magnetostatic Surface Wave Directional Coupler

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This paper describes a new magnetostatic surface wave (MSSW) component: an adjustable MSSW directional coupler. This device, similar to the surface-acoustic-wave (SAW) multistrip coupler, has been realized on an yttrium iron garnet (YIG) film. A 100% power transfer from one track to the other has been obtained at 2.5 GHz. The unidirectional coupling has frequency filtering characteristics due to the dispersion of MSSW. The device presents a feature very important for applications: the coupling is continuously adjustable by an applied magnetic field, a variation of about 50 Oe being necessary to switch the power from one track on to the other.

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